CLAIMS

1. An electron spectroscopy analysis method for executing a desired analysis with respect to a surface of a sample to be analyzed by irradiating a high-energy particle to said sample to be analyzed under a vacuum atmosphere, and detecting a number and a kinetic energy of electrons emitted from said sample to be analyzed on the basis of a photoelectric effect, wherein the method comprises steps of ionizing a fullerene, irradiating the fullerene ionized to the surface of said sample to be analyzed before irradiating the high-energy particle to said sample to be analyzed, and removing a contaminant present on the surface of said sample to be analyzed.

2. An electron spectroscopy analysis method for executing a desired analysis with respect to a depth direction of a sample to be analyzed by irradiating a high-energy particle to said sample to be analyzed under a vacuum atmosphere, and detecting a number and a kinetic energy of electrons emitted from said sample to be analyzed on the basis of a photoelectric effect, wherein the method comprises steps of ionizing a fullerene, irradiating the fullerene ionized to the surface of said sample to be analyzed before irradiating the high-energy particle to said sample to be analyzed, and ion-etching the surface of said sample to be analyzed.

3. The electron spectroscopy analysis method according to claim 1 or 2, wherein a fullerene having an atomicity of 100 or less is used as said fullerene.

4. The electron spectroscopy analysis method according to claim 3, wherein C60, C70 or C84 is used as said fullerene having an atomicity of 100 or less.

5. The electron spectroscopy analysis method according to claim 3, wherein an endohedral fullerene in C60, C70 or C84 is used as said fullerene having an atomicity 100 or less.

6. An electron spectroscopy analytical apparatus for executing a desired analysis with respect to a surface of a sample to be analyzed by irradiating a high-energy particle to said sample to be analyzed from a high-energy particle irradiating unit under a vacuum atmosphere, and detecting a number and a kinetic energy of electrons emitted from said sample to be analyzed by an analyzer on the basis of a photoelectric effect, wherein the apparatus comprises an ion gun for ionizing a fullerene and irradiating the fullerene ionized, and the apparatus ionizes the fullerene and irradiates the fullerene ionized from said ion gun to the surface of said sample to be analyzed before irradiating the high-energy particle to said sample to be analyzed, thereby removing a contaminant present on the surface of said sample to be analyzed.

7. An electron spectroscopy analytical apparatus for executing a desired analysis with respect to a depth direction of a sample to be analyzed by irradiating a high-energy particle to said sample to be analyzed from a high-energy particle irradiating unit under a vacuum atmosphere, and detecting a number and a kinetic energy of electrons emitted

from said sample to be analyzed by an analyzer on the basis of a photoelectric effect, wherein the apparatus comprises an ion gun for ionizing a fullerene and irradiating the fullerene ionized, and the apparatus ionizes the fullerene and irradiates the fullerene ionized from said ion gun to the surface of said sample to be analyzed before irradiating the high-energy particle to said sample to be analyzed, and ion-etches the surface of said sample to be analyzed.

8. The electron spectroscopy analytical apparatus according to claim 6 or 7, wherein a fullerene having an atomicity of 100 or less is used as said fullerene.

9. The electron spectroscopy analytical apparatus according to claim 8, wherein C60, C70 or C84 is used as said fullerene having an atomicity of 100 or less.

10. The electron spectroscopy analytical apparatus according to claim 8, wherein an endohedral fullerene in C60, C70 or C84 is used as said fullerene having an atomicity of 100 or less.